



Final Report

Addressing High-Risk Substance Use through STI Clinics

Strengthening Connections to Treatment and Behavioral Health Services Project

Acknowledgements

The following is the final report of the National Association of County and City Health Officials' (NACCHO) *Addressing High-Risk Substance Use through STI Clinics: Strengthening Connections to Treatment and Behavioral Health Services* project.

NACCHO wishes to acknowledge participants in the study that piloted the SBIRT intervention: Rhode Island STD Clinic, Unified Government of Wyandotte County and Kansas City Public Health Department, and Fairfax County Health Department STI Clinic. This project was funded by the Centers for Disease Control and Prevention Division of STD Prevention under NOA #NU38OT000306-01-01.

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Background

NACCHO partnered with the Centers for Disease Control and Prevention (CDC) in 2019 on the *Addressing High-Risk Substance Use through STI Clinics: Strengthening Connections to Treatment and Behavioral Health Services* project (the Project), which piloted the use of Screening, Brief Intervention, and Referral to Treatment (SBIRT) to address high-risk substance use (HRSU) among clients seeking testing and treatment in STI clinical settings.

HRSU refers to the use of illicit drugs and non-medical use of prescription drugs (e.g., opioids, methamphetamine, and crack/cocaine) which are strongly associated with high risk for adverse outcomes, including dependence, substance use disorders (SUD), and non-fatal and fatal overdoses.^{1,2} Moreover, persons engaged in HRSU often experience disinhibition and/or engage in activities, such as sex work and needle sharing, that can facilitate the spread of diseases like HIV, STIs, and viral hepatitis.³

In the United States, men who have sex with men (MSM) are more than twice as likely to use substances associated with greater health hazards and addiction, including heroin, cocaine, and amphetamine⁴—as well as engage in daily drug use.^{5,6} Among heterosexuals, HRSU has risen dramatically, in both urban and rural areas, in the wake of the U.S. opioid crisis and the socioeconomic shocks and disruptions in care during COVID-19.^{7,8} Rates of HRSU have more than doubled among heterosexuals diagnosed with STIs like syphilis, while STI diagnoses have been shown to be associated with increased odds of injection drug use among women.⁹ A study leveraging data from the National Notifiable Diseases Surveillance System found that women, men who had sex with women (MSW), and MSM diagnosed with syphilis and other STIs who reported HRSU often had histories of incarceration and anonymous sex and/or sex in exchange for drugs or money.¹

Data shows that SUD and HRSU rates are often higher among clients of STI clinics compared to the general population.^{10,11,12,13} At the same time, persons diagnosed with STIs and self-reported HRSU are more likely to experience poverty, homelessness and housing instability, lack of access to insurance coverage and health care, and limited educational attainment.^{14,15,16,17} Racism and stigma create additional barriers to care that exacerbate the disparate impact of HRSU, STIs, and HIV among people of color, and, in particular, Black and Latino MSM and Black women.^{18,19,20} Persons engaged in HRSU at STI clinics report higher rates of condomless sex, multiple partners, and STI diagnoses than those who do not use substances.²¹



About the Screening, Brief Intervention, and Referral to Treatment (SBIRT) Intervention

The Screening, Brief Intervention, and Referral to Treatment (SBIRT) intervention leverages behavioral interventions such as motivational interviewing (MI), an evidence-based, collaborative, goal-oriented style of communication framed in the patients' language of change, to help clients presenting at STI clinics engaged in HRSU set goals related to their substance use and health. The Project's SBIRT steps involved:



Screening

Identifying/assessing the degree of substance use and identifying the appropriate level of treatment among clients;



Brief Intervention

Increasing awareness of substance use among clients, motivating behavior change; and



Referral to Treatment

Connecting clients requiring additional services to care.

SBIRT originally was developed to help connect persons engaged in alcohol use to treatment. While results from several trials applying SBIRT to mitigate HRSU and SUD among substance users in diverse clinical settings have been mixed,^{22,23,24,25} other studies indicate that SBIRT can facilitate early identification and intervention for those engaged in substance use who seek services in STI clinics.²⁶ For example, three public New York City STI clinics that implemented a SBIRT model reported increases in successfully connecting patients with substance use treatment, resulting in improvements in their SUD and mental health outcomes and a reduction in condomless sexual contact, over a six-month follow-up.²⁷ Considering the syndemic of HRSU and STIs, the Project's proposed implementation of SBIRT in STI clinics presented a unique opportunity to reach persons engaged in HRSU and connect them with potentially life-saving treatment and care.



Program

The Project piloted SBIRT in selected STI clinics, with providers conducting basic screenings to identify clients engaged in HRSU and offering them referrals and warm handoffs to substance use treatment services. The Project sought to increase knowledge around:

- HRSU and sex and drug-linked behaviors and outcomes among STI clinic patients;
- Potential models and promising practices for the administration of SBIRT or SBIRT-informed interventions for HRSU in the STI clinic setting; and
- Referral and linkage to SUD treatment and/or behavioral health services among STI clinic patients receiving the selected SBIRT or SBIRT-informed intervention.

A call for proposals was released in June 2019 to recruit potential demonstration sites. Those accepted used funds to implement SBIRT in their facilities, ultimately:

- Assessing and identifying gaps in existing intake and screening forms and processes;
- Developing protocols and adapting workflows to integrate intervention into patient visits;
- Determining screening questions or processes and criteria for providing brief intervention;
- Finalizing selection of SBIRT or SBIRT-informed intervention;
- Working with SUD and behavioral health partners to formalize partnerships, including roles, responsibilities, and processes;
- Developing staff training and patient education materials; and
- Establishing monitoring and evaluation plans and data collection procedures.

Three sites were selected to participate in the study, each of which focused on a specific medically underserved population disparately impacted by HRSU and STIs:

- Rhode Island STD Clinic, which focused on MSM;
- Unified Government of Wyandotte County and Kansas City Public Health Department (UGPHD) STI Clinic, which focused on women of reproductive age; and
- Fairfax County Health Department STI Clinic, which focused on underserved populations, including communities of color and sexual and gender minorities.

Sites Models and Workflow

The following is an overview of each site's project activities including how they used the SBIRT intervention in their clinic and the steps and tools used.

Note: Tracking forms, scripts, screening instruments, and other materials related to the interventions are available online with links found in the **Additional Resources** section.

Rhode Island STD Clinic

Background: The Rhode Island STD Clinic (RISTD), situated within The Miriam Hospital of the Lifespan Healthcare System, implemented its SBIRT model to address spikes in gonorrhea, chlamydia, and syphilis incidence. Between 2007 and 2019, annual new cases of chlamydia had increased 55%, gonorrhea 78%, and syphilis 233% in the state.²⁸ The smallest state in the country, Rhode Island, ranks fifth in overdose deaths and first in prevalence of substance use and dependence.²⁹ Substance use has contributed significantly to the state's increase in STI transmissions,³⁰ disproportionately impacting MSM.^{31,32} Particularly concerning is that, while opioid use has stagnated among MSM overall, it appears to have risen among Black MSM.³³ RISTD's efforts to address HRSU among their clients began with an in-clinic intervention that shifted online in fall 2020 due to COVID-19.

In-Clinic Intervention Workflow Model: RISTD implemented SBIRT for patients who presented for STI care and indicated they had engaged in substance use (excluding cannabis and poppers) in the previous 12 months. (See Figure 1.) RISTD clinicians (Advanced Practice Providers, including nurse practitioners, and HIV Qualified Professional Test Counselors) delivered the intervention, first having patients who indicated they had engaged in substance use complete the Drug Abuse Screening Test-10 (DAST-10) instrument, a validated tool that includes ten questions assessing the presence or absence of negative consequences of substance use.^{34,35} Scores ranged from 0-10, with scores 0-2 meaning low-level to no problems (social, occupational, psychological, or physical) with substance use, and scores 3-10 indicating moderate to severe substance use. (See Table 1.)

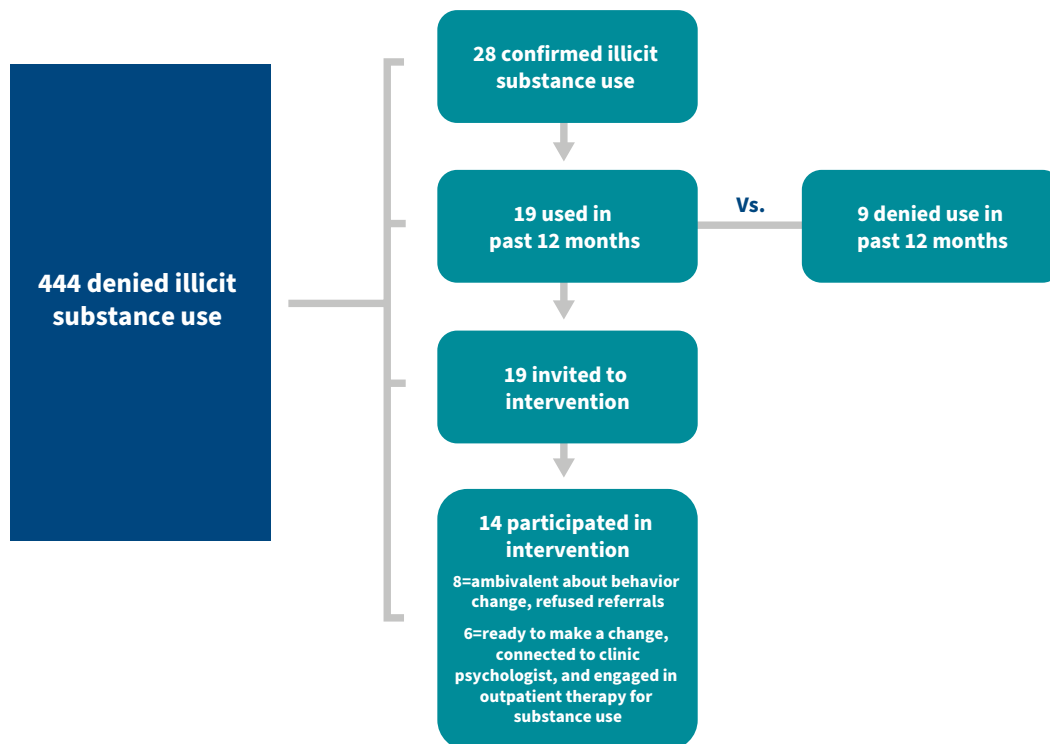
Table 1: Drug Abuse Screening Test-10 Scale Scores

Total score	Score interpretation
0	No problems endorsed
1 – 2	Low level of problems
3 – 5	Moderate level of problems
6 – 8	Substantial level of problems
9 – 10	Severe level of problems

Patients who scored a 2 or below would be asked if they wanted to discuss their substance use at that time or during a follow-up visit. Those who scored a 3 or higher were offered the SBIRT intervention. Those who consented to the intervention engaged in an open discussion with the clinician who provided clarification of substance use; built rapport to learn how substance use fits with patient values; elicited change talk from patient about substance use; provided feedback about HRSU and sexual behaviors; evoked motivation for change; helped develop a change plan for the patient; and connected the patient to a care provider based on their needs and change goals.³⁶ Patients who declined the intervention were encouraged to follow up with their provider at a future visit to discuss safe approaches to substance use. Patients interested in addressing their substance use received a warm handoff to the psychologist in Miriam Hospital's Behavioral Medicine Service. (If a warm handoff was not available, the psychologist called the patient directly as soon as possible.) Patients in need of medication for opioid use disorder were connected with community resources and engagement with addiction medicine providers. In addition, those who expressed ambivalence about change or declined referrals to treatment received a list of community resources.

In-Clinic Intervention Outcomes: During the clinic implementation, RISTD screened 646 patients who presented for care to the clinic between January 15, 2020 and July 23, 2020. Of those who completed the intake forms and completed screening, 444 denied illicit substance use and n=28 patients endorsed illicit substance use. Nine of these patients denied use in the previous 12 months or scored a 1-2 on the DAST-10, indicating non-problematic use of substances. The remaining 19 patients scored 3 or greater, which prompted the initiation of the brief intervention and referral to treatment protocol. Of these, 14 engaged in the intervention, including eight individuals who endorsed ambivalence about making a change and declined referrals and six patients who endorsed importance of and confidence for change. Among the six patients, four accepted referrals to community resources and two were connected via warm handoff to the clinic psychologist and engaged in outpatient therapy for substance use. (See Figure 1.) Below are tables reflecting the demographics and substances endorsed by the 19 individuals scoring 3 or greater on the DAST-10. (See Tables 2-3.)

Figure 1: Rhode Island STD In-Clinic Client Engagement, n=472



Online Intervention Workflow Model: RISTD experienced significant challenges related to the COVID-19 pandemic. This included reducing the number of in-person STI clinic visits, ending “walk-in” visits, and implementing telemedicine and telephone SBIRT screenings. SBIRT was promoted via dating apps/sites and Google search terms to seek those who aligned with the updated enrollment criteria (i.e., be \geq age 18 and have one or more of the following: symptoms of STIs in the previous 12 months; known exposure to a partner with an STI in the previous 12 months; treated presumptively for an STI in the previous 12 months; present to STD clinics for routine testing; and/or engagement in high-risk sexual behaviors in the previous 12 months such as engagement in sexual behaviors with >1 partner, sexual engagements while intoxicated/under the influence).

Those eligible were provided with information about the study and an electronic consent form that they were asked to read and sign. Once signed, they were asked to complete an online survey. In the survey, participants were asked questions in the following domains: 1) Behaviors (i.e., sexual and substance use behaviors); 2) Last STI screening, including setting and results; 3) Changes in behaviors due to COVID-19 (e.g., changes to sexual behaviors, substance use behaviors, and care-seeking behaviors); and 4) Substance use (AUDIT^{37,38} and DAST-10^{34,35}) and substance use behaviors, including chemsex behaviors. Within the survey, “bot checks” ensured real people submitted responses only once. Using REDCap^{39,40} software, automatic notifications alerted staff of completed consent forms and surveys. Staff followed up to determine the outreach needed. Participants who endorsed high-risk sexual behaviors, but no substance use, or minimal/non-problematic use of substances as determined by their DAST-10 score (i.e., 0 to 2), were called and offered referrals to STI clinical care. Participants who reported high-risk sexual behaviors and substance use in the previous 90 days were offered the SBIRT intervention within 48 hours. (See Figure 2.)

Online Intervention Outcomes: A total of $n=100$ online surveys were completed, of which $n=81$ were confirmed valid (completed by real people). Participants answered questions regarding sexual health and substance use. A total of 55 individuals eligible to receive sexual health resource materials or the SBIRT intervention, including referral to substance use treatment, were identified. Two staff members reached out to eligible participants—25 participants were reached, seven of whom received SBIRT and referral to treatment, while 18 received sexual health resources. (See Tables 4-5, and Figure 3.)

Lessons Learned: Staff appreciated the training received to facilitate the intervention (four experiential, didactic training sessions, 60-90 minutes each), with one-half of on-site facilitators indicating they were new to motivational interviewing. Staff felt the intervention held great value for clients but was difficult to implement considering their already limited time with patients. Some clients also found the intervention invasive and unexpected in an STI setting. Unfortunately, the emergence of the COVID-19 pandemic limited staff’s ability to continue in-person implementation and implementation of next steps for the intervention, which involved the development and inclusion of smart phrases in the electronic medical record for SBIRT and establishment of a standard of care protocol.



Figure 2: Rhode Island STD Clinic SBIRT Online Model

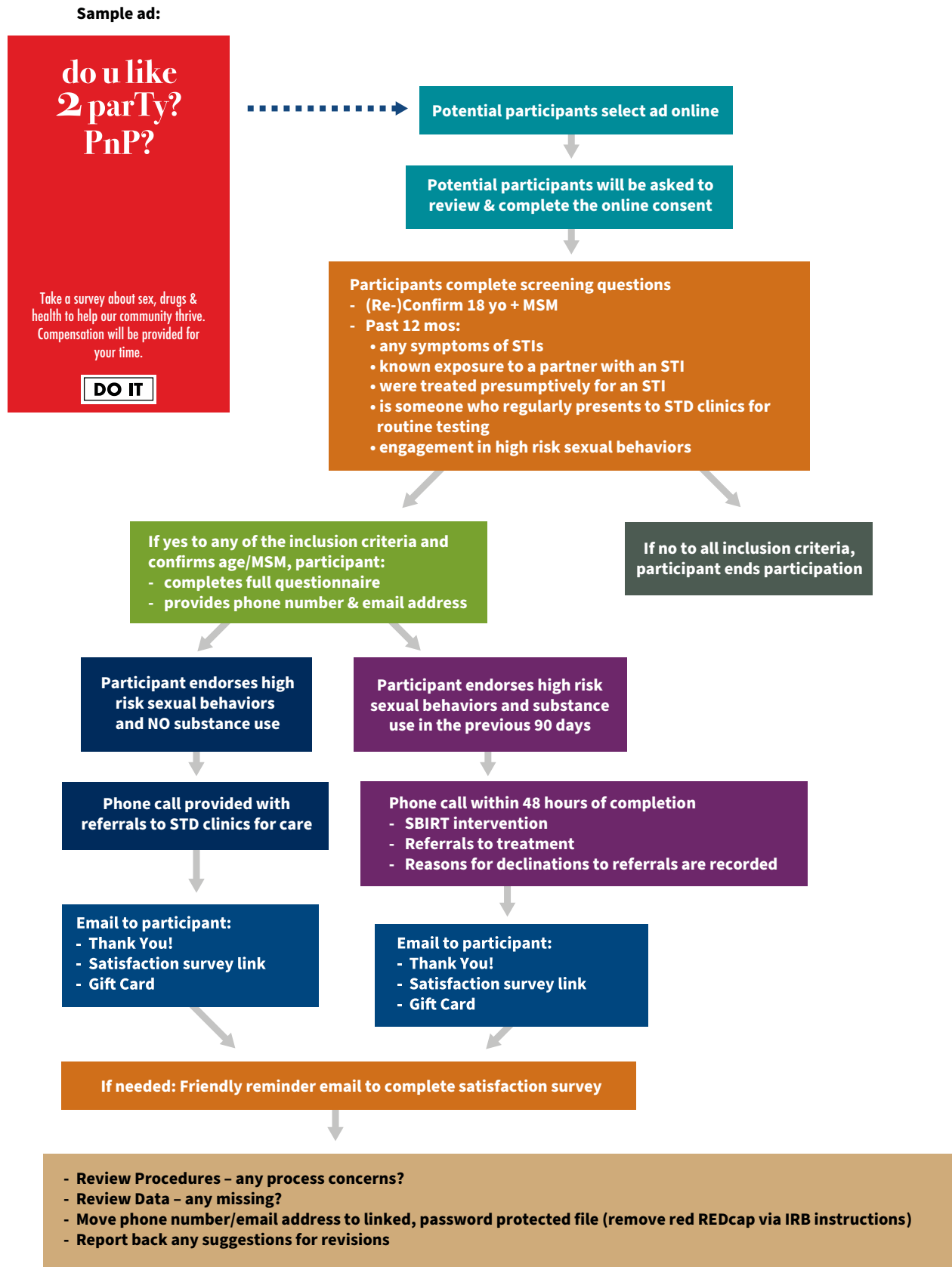


Table 2: Rhode Island STD Clinic – In-Clinic Intervention Demographics of Participants Offered SBIRT, n=19

Variable	n	%
Gender		
Men	13	68.4
Women	4	21.1
Sexual Orientation		
Heterosexual	8	42.1
Gay	6	31.6
Bisexual	3	15.8
Race		
Asian	1	5.3
Black	3	15.8
White	13	68.4
Ethnicity		
Latinx	1	5.3
Non-Latinx	12	63.2
Educational Attainment		
High School Graduate	2	10.5
Some College	8	42.1
Two-Year College Degree	2	10.5
Four-Year College Degree	5	26.3
Graduate School	1	5.3
Employment Status		
Not Employed	8	42.1
Employed (part-time)	1	5.3
Employed (full-time)	8	42.1
Student	1	5.3
Unstable housing (past 12 months)	3	15.8

Table 3: Rhode Island STD Clinic – In-Clinic Intervention, Reported Substances Used, n=19

Substance	n	%
Crack/Cocaine	11	57.9
Methamphetamine	5	26.3
Sedatives/Sleeping Pills	2	10.5
Hallucinogens	6	31.6
Street Opioids	3	15.8

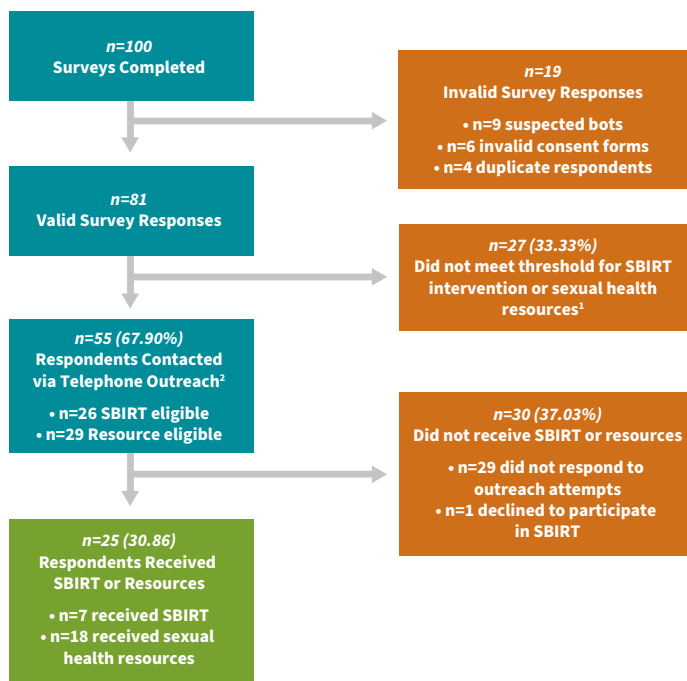
Table 4: Rhode Island STD Clinic – Online Intervention Participant Demographics, n=81

Variable	n	%
Gender		
Men	64	79.01
Transgender Men	6	7.41
Transgender Women	8	9.88
Genderqueer	3	3.70
Sexual Orientation		
Heterosexual	1	1.23
Gay	58	71.60
Bisexual	18	22.22
Queer	4	4.94
Race		
White	60	74.07
Black	14	17.28
American Indian	2	2.47
Pacific Islander	3	3.70
Asian	1	1.23
Other	1	1.23
Ethnicity		
Latinx	14	17.28
Non-Latinx	66	81.48
Decline to answer	1	1.23
Educational Attainment		
Some High School	2	2.47
High School Graduate	5	6.17
Some College/Technical Schools	17	20.99
College Graduate	34	41.98
Graduate School (Masters or Above)	23	28.40
Unstable housing (past 12 months)	33	40.74
Sex work (past 3 months)	8	9.88
Living with HIV	6	7.41
	Mean	SD
Age	31.17	8.08

Table 5: Rhode Island STD Clinic – Online Intervention Participants, Lifetime and Past Month Substance, n=81

Variable	Lifetime Use		Past-Month Use		
	n	%	n	%	Mean Days Use (SD)
Marijuana	49	60.49	36	44.44	16.17 (11.66)
Synthetic Marijuana	7	8.64	3	3.70	3 (2.65)
Poppers (Alkyl Nitrates)	22	27.16	18	22.22	8.83 (7.42)
MDMA	24	29.63	10	12.35	2.60 (1.51)
Mushrooms	22	27.16	10	12.35	2.80 (2.62)
GHB	16	19.75	9	11.11	10.89 (12.25)
Ketamine	11	13.58	6	7.41	1.83 (.98)
Methamphetamine	19	23.46	14	17.28	13.93 (12.33)
Cocaine	24	29.63	13	16.05	4.0 (3.72)
Heroin	8	9.88	4	4.94	4.75 (4.11)
Misuse of Psychotherapeutics					
Stimulant Medications	21	25.93	16	19.75	7.0 (6.19)
Anti-Anxiety Medications	18	22.22	12	14.81	9.58 (9.61)
Opioid Medications	13	16.05	0	0	n/a
Other Illegal Substances	6	7.41	3	3.70	1.33 (.58)

Figure 3: Rhode Island STD Clinic SBIRT Online Intervention Diagram



¹ To be eligible for SBIRT intervention or resources, participants must have met either or both of these criteria: 1) reported sexual activity (past three months) 2) endorsed past-year use of substances (excluding alcohol and marijuana) and scored > 3 on the Drug Abuse Screening Test (DAST-10)

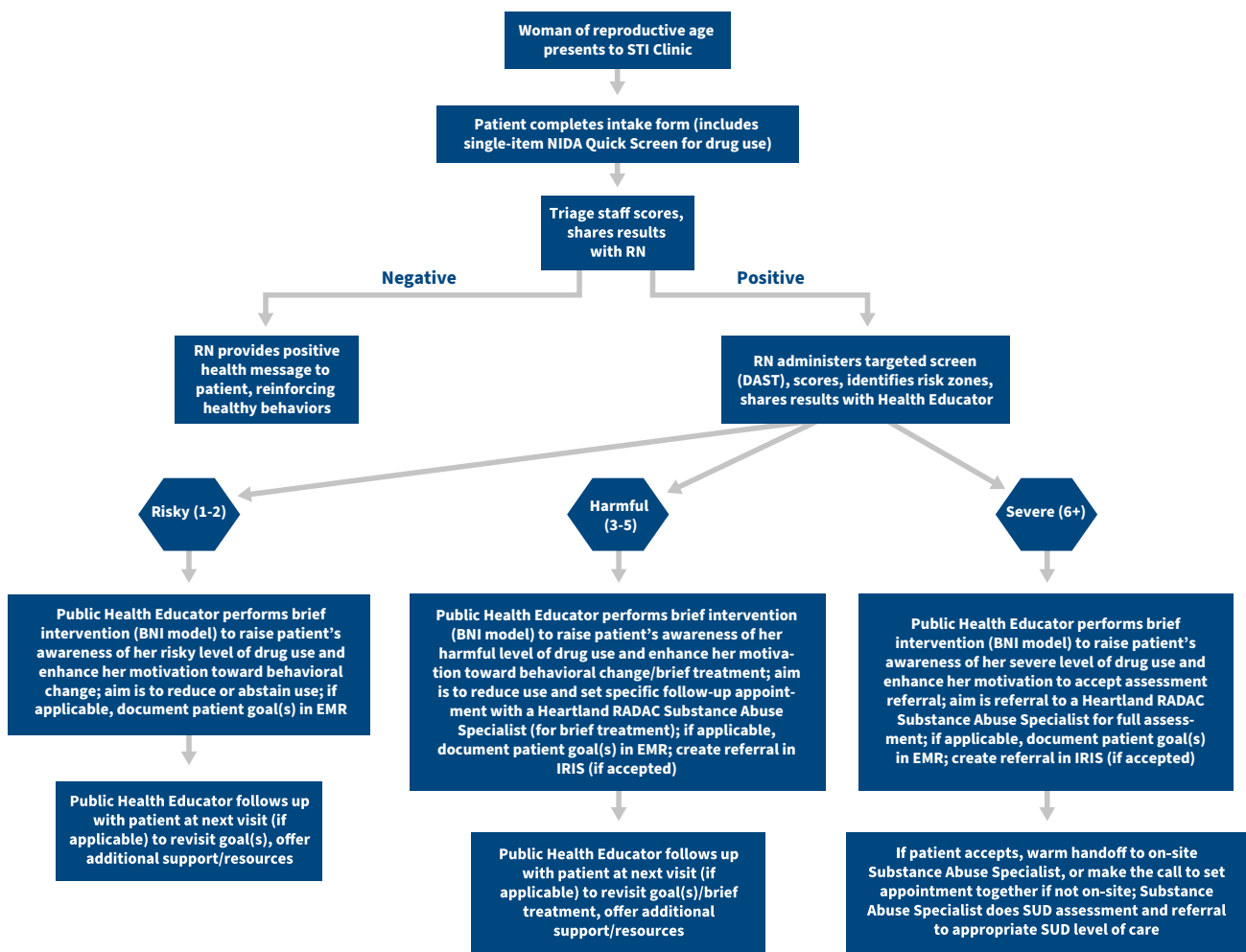
² Participants who met criteria 2, or criteria 1 AND 2, were eligible to receive the SBIRT intervention. Those meeting criteria 1 only were eligible to receive sexual health resources. Eligible respondents received a maximum of three outreach attempts before their files were closed.

Unified Government of Wyandotte County and Kansas City Public Health Department (UGPHD) STI Clinic

Background: In response to the prevalence of HRSU and associated health and social consequences in their local community, the Unified Government of Wyandotte County and Kansas City, Kansas Public Health Department (UGPHD) STI Clinic implemented a SBIRT intervention targeting women of reproductive age, who account for more than two-thirds (67.8%) of patients seen in the clinic. The county leads the state in STIs and ranks nearly last in overall health outcomes, directly contributing to high rates of HRSU, including methamphetamine, cocaine, opioids, and PCP, creating additional barriers to treatment and care, particularly for women of reproductive age.^{41, 42, 43, 44, 45} Due to COVID-19, the clinic pivoted, expanding the scope of the intervention and screening all patients for HRSU.

Intervention Workflow Model: UGPHD partnered with Heartland Regional Alcohol and Drug Assessment Center (Heartland RADAC) and the University of Missouri-Kansas City School of Nursing and Health Studies' Collaborative to Advance Health Studies to implement SBIRT. UGPHD's original three goals were to 1) gain an increased knowledge of HRSU and sex and drug-linked behaviors and outcomes among patients receiving services in the UGPHD STI Clinic; 2) develop, implement, and evaluate the efficacy of a SBIRT model tailored to HRSU in the UGPHD STI Clinic; and 3) increase referral and successful linkage to SUD treatment and/or behavioral health services through a partnership with Heartland RADAC. A Substance Abuse Specialist was embedded in the STI Clinic to eliminate barriers to treatment and care. (See Figure 4.)

Figure 4: UGPHD STI Clinic Workflow. This UGPHD Workflow model was established prior to expansion of study recruitment.



The intervention began with a National Institutes of Drug Abuse (NIDA) Quick Screen, which was integrated into the intake form. Staff reviewed the results with patients. If the NIDA Quick Screen results were negative, staff reinforced healthy behaviors. Those who screened positive engaged in a Brief Negotiated Interview and completed the DAST-10. The health educator reviewed the DAST-10 score, classifying patients' risk level as risky (1-2 points), harmful (3-5 points), or severe (6+ points). (See Table 6.)

Table 6: Drug Abuse Screening Test-10 Scale Scores

Points	Risk Classification
1-2	Risky
3-5	Harmful
6+	Severe

Those classified as risky received no further engagement. Patients who scored in the "harmful" or "severe" range received a warm handoff to treatment. Before the pandemic, the Substance Abuse Specialist, who worked onsite at UGPHD's clinic one day per week, would be engaged with a client. (The placement stopped at the onset of COVID-19 but resumed in late 2021.) When the specialist was not available, UGPHD paged the Substance Abuse Specialist for patients who expressed interest in treatment or accompanied patients to RADAC to set up an appointment.

Impact of COVID-19: With the onset of the COVID-19 pandemic, nearly all patients underwent screening for the intervention, except those returning to the clinic for treatment who had already undergone SBIRT. UGPHD also replaced registered nurses with health educators, who proved more receptive to implementing the SBIRT intervention. Instead of using the IRIS system for referrals as originally planned, patients were instructed to call Heartland RADAC to schedule an assessment (and, pre-COVID, received a warm handoff to Heartland RADAC staff who were co-located with the UGPHD STI Clinic several days a week).

Lessons Learned: The setbacks of the pandemic prevented the clinic from demonstrating concrete outcomes. Though SBIRT was reintroduced in 2021, patients proved unreceptive to referrals to treatment, most likely due to the multifaceted stressors introduced and exacerbated by the pandemic. HRSU appeared to be a behavior that patients may not have been ready to change. However, SBIRT created opportunities for meaningful conversations about risky sexual behavior and STIs. Patients seemed more open to talking about that and changing related behaviors versus broaching the topic of substance use. SBIRT's structured approach helps patients more openly discuss safer sex practices, ask their partners about their sexual activities and STI status, and share with providers how they meet partners.

Fairfax County Health Department STI Clinic

Background: Fairfax County Health Department (FCHD) focused its SBIRT intervention on underserved persons (communities of color and sexual and gender minorities in the county.) These focus areas speak to the intersecting epidemics of HRSU and STIs throughout Fairfax County, VA, the largest jurisdiction in the metropolitan Washington, DC region, with approximately 1.2 million people. Opioid use has emerged as the leading cause of unnatural death in Fairfax County, exceeding motor vehicle crashes and gun deaths. Concurrently, rates of STIs have increased, with substantial increases in syphilis, gonorrhea, and chlamydia infections. The risk for HRSU and STIs is greatest among young adults, with substance use associated with increased disinhibition and sexual behaviors that lead to (or mediate) STI risk.

Intervention Workflow Model: The FCHD screening process was integrated into the clinic check-in process. Patients were handed a tablet by the front office staff on which they completed screening. The screening data were collected through a Qualtrics form managed by George Mason University staff, funded by the Substance Abuse and Mental Health Services Administration (SAMHSA), to support the implementation of SBIRT in Virginia, independent of the NACCHO project. FCHD’s SBIRT demonstration project was facilitated at five clinics throughout the region: Annandale, Herndon, Joseph Willard, Mount Vernon, and Springfield. (See Figure 5.) The intervention involved an integrated and extensive screening encompassing two components. All patients—except those that had engaged in the intervention recently (e.g., those returning to the clinic for STI treatment)—completed the Drug Universal Screen to assess past year substance use. If the patient reported using illicit drugs or misusing prescription medicines in the past year, they also completed the DAST-10. Patients who received a score of 0 were labeled low/no risk; those who scored 1 and above were classified as mild risk (1-2), moderate risk (3-5), and severe risk (6+). (See Table 7.)

Table 7: DAST-10 Scores, Risk Classifications, and Recommended Interventions

Points	Risk Classification	Recommended Intervention
0	Low/No Risk	Reinforce healthy choices
1-2	Mild Risk	Brief intervention
3-5	Moderate Risk	Brief intervention + referral for brief treatment
6+	Severe Risk	Brief intervention + referral for specialty treatment

A public health nurse (PHN) reviewed the results, triaging the patient according to their responses to the Drug Universal Screen (scored as yes/no to use of drugs in the last 12 months) and DAST-10 (score of 0-10 points). The provider reinforced healthy behaviors among those who had low/no risk, while those determined to be at mild, moderate, or severe risk completed the SAMHSA GPRA-B tool to determine which substances they used and routes of exposure. They were then offered the Brief Intervention. The engagement ended at that time for those who declined. Engagement for those who agreed to the intervention varied by patient risk level. For patients who screened positive for drug use in the past 12 months but had mild risk, the nurse delivered the Brief Negotiated Interview. Patients who screened positive and had moderate risk engaged in the brief intervention interview and were offered an opportunity to schedule onsite treatment (lasting four to 12 weeks). Patients at severe risk also engaged in the interview but were offered more intensive onsite treatment. In addition to drug use, FCHD’s SBIRT for HRSU incorporated screenings for:

- **Depression**, measured using Patient Health Questionnaire (PHQ-9), a nine-item survey that screens for depression. Patients respond to each item using the following scale: all=0, several days=1, more than half the days=2, and nearly every day=3. The total score is equal to the sum of the item answers, with higher scores indicating more depression.
- **Alcohol Use**, measured using the Alcohol Use Disorders Identification Test (AUDIT)—Self-Report, a 10-item, self-report screening tool that helps clinicians assess patients’ alcohol consumption, drinking behaviors, and alcohol-related problems.

- **Tobacco Use**, measured with a single item from the Tobacco, Alcohol, Prescription Medication (TAPS) tool: “In the past 12 months, how often have you used any tobacco product (for example, cigarettes, e-cigarettes, cigars, pipe, or smokeless tobacco)?”

Figure 5: FCHD STD Clinic SBIRT Workflow Model

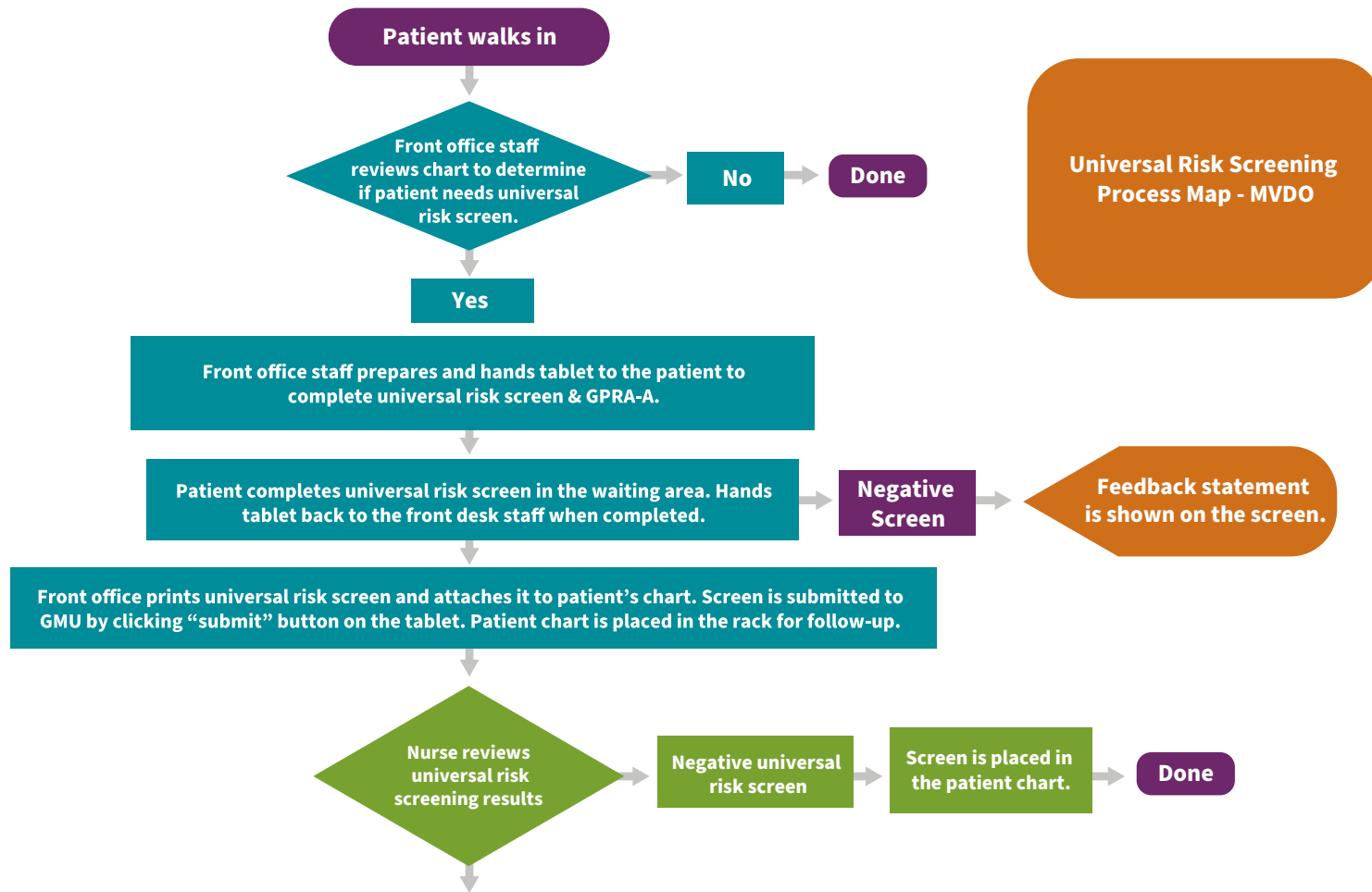
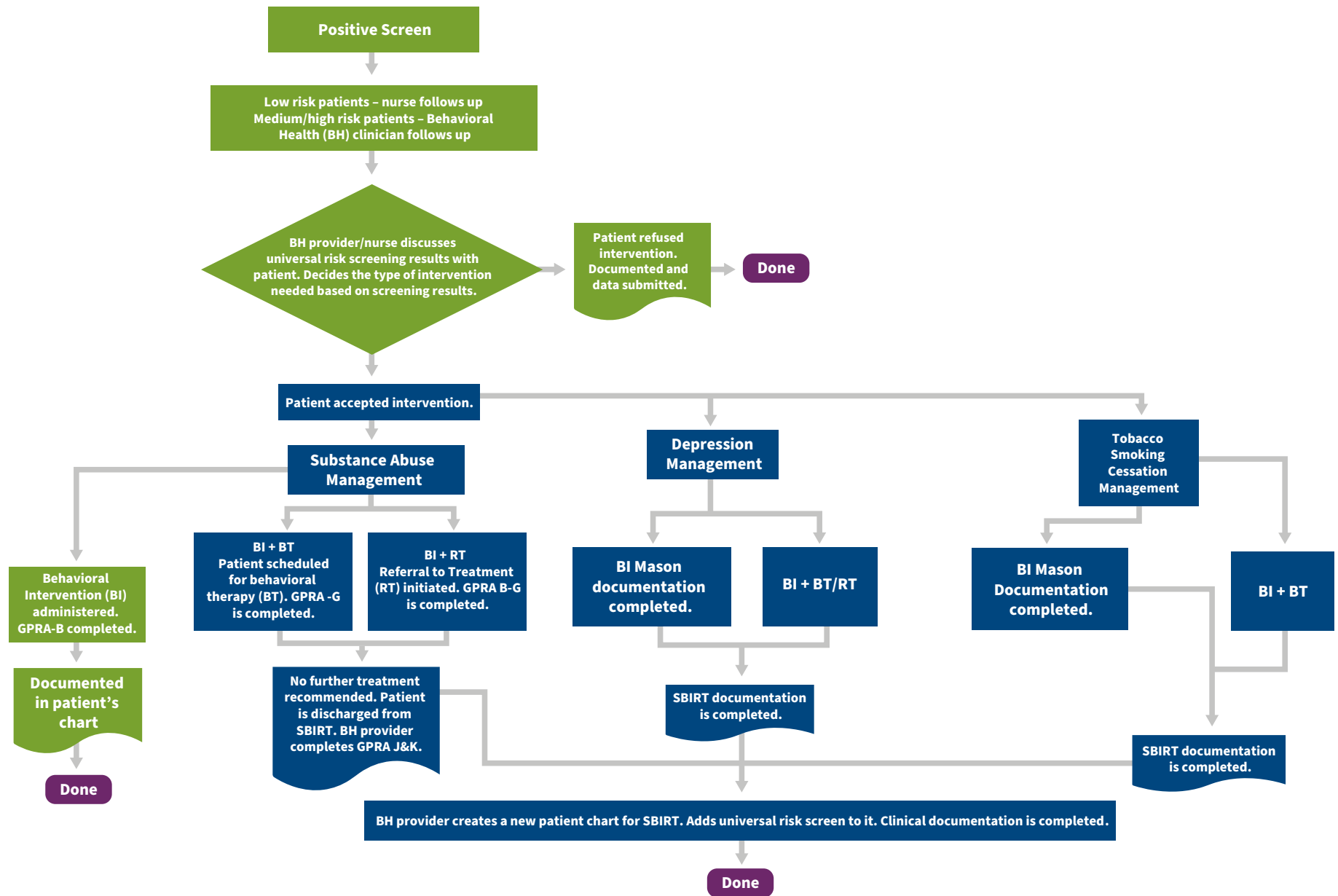


Figure 5: FCHD STD Clinic SBIRT Workflow Model Continued



Impact of COVID-19: During the pandemic, many HRSU project staff were reassigned to the COVID-19 response; onsite services were restricted and consolidated into one location. The SBIRT intervention was suspended from December 2020 until summer 2021. Soon after restarting the intervention, it was shut down permanently due to ongoing uncertainty about COVID-19 and changes to the broader Virginia-wide SBIRT initiative.

Outcomes: Of the n=390 clients who participated in the SBIRT screening, the majority were male (62.0%), reporting either Black (29.2%) or white race (32.0%). A total of 135 (34.6%) clients reported Hispanic ethnicity. Participants ages 25-34 (46.9%) followed by those 18-24 (24.4%) accounted for the majority of participants. (Age was not obtained for 13 participants.) (See Table 8.) The SBIRT intervention was delivered relatively evenly across all five locations with providers conducting an average of 2 to 4 interventions (interviews) per week. (See Figure 6).

A total of 121 clients reported drug use (not including marijuana) in the past 30 days, the past year, or at any point in their lifetime. (See Figure 7.) When broken down by degree of use, 44 individuals reported using a high-risk substance within the past 30 days. A total of 162 interventions were conducted for 105 patients, indicating intersectional issues around drug use, alcohol use, tobacco use, and depression. For all positive risk levels (mild, moderate, and severe), data were collected indicating the intervention received by each patient risk type. Each category of substance type had individuals with elevated risk levels fail to receive an intervention. Over three-fourths (76.7%) of clients who required additional assistance received the appropriate intervention. Just 1.0% received an intervention higher than their indicated level of need, while 22.3% received inadequate intervention. Reasons for this inadequate intervention varied. Of those referred to alcohol and drug treatment (n=97), 69% engaged in treatment, 27% refused treatment, 2% were already in treatment, and 2% had false positives. Of the n=58 patients referred to tobacco treatment, 60% sought treatment, 36% refused, and 3% had false positives. Two-thirds (67%) of the 12 patients identified with moderate to severe depression sought treatment as recommended, while 28% were already in treatment. The remaining 5% were not engaged due to a lack of access to a provider.

Lessons Learned: Providers were surveyed about their experience with the SBIRT program (See Figure 8), with 27% indicating that they agreed or strongly agreed that they felt comfortable administering motivational interviewing. In comparison, another 33% indicated they agreed or strongly agreed that they supported continuing SBIRT in the future and that the SBIRT program benefits clients. Comments reflected the limited resources available to providers to carry out SBIRT, particularly during the pandemic. As one nurse stated, “While I see a place for this type of program (SBIRT), I felt it greatly compromised the true nature of services the client was seeking that day... and was a further obstacle in trying to get the detailed information we needed to get from them for their reason for visiting [the STI clinic]. SBIRT blindsided them, so they couldn't truly focus on sharing info that was more relevant to their visit because we were delving into other matters.” Another participant said, “Let [patients] know that SBIRT is available to them verses semi-forcing participation... and letting them assume it is part of the normal STI clinic process.” When asked, “What recommendations do you have to improve the SBIRT program?” respondents suggested increasing the availability of behavioral health therapists and reducing the amount of time required to implement SBIRT.

Table 8: Fairfax County Health Department STI Clinic, Demographics of Participants Offered SBIRT, n=390

Variable	n	%
Gender		
Men	242	62.0
Women	143	37.0
Other	4	1.0
Sexual Orientation		
Heterosexual	8	42.1
Gay	6	31.6
Bisexual	3	15.8
Race		
White	121	31.0
Black	114	29.2
Asian	37	9.5
Native American	11	2.8
Native Hawaiian	4	1.0
Other	86	22.1
Two or More Races	17	4.4
Ethnicity		
Hispanic	135	34.6
Non-Hispanic	290	65.4
Age (n=377, missing n=13)		
18-24	92	24.4
25-34	177	46.9
35-44	63	16.7
45-54	21	5.6
55-100	19	5.0

Figure 6: Fairfax County Client Engagement, All Locations, n=390

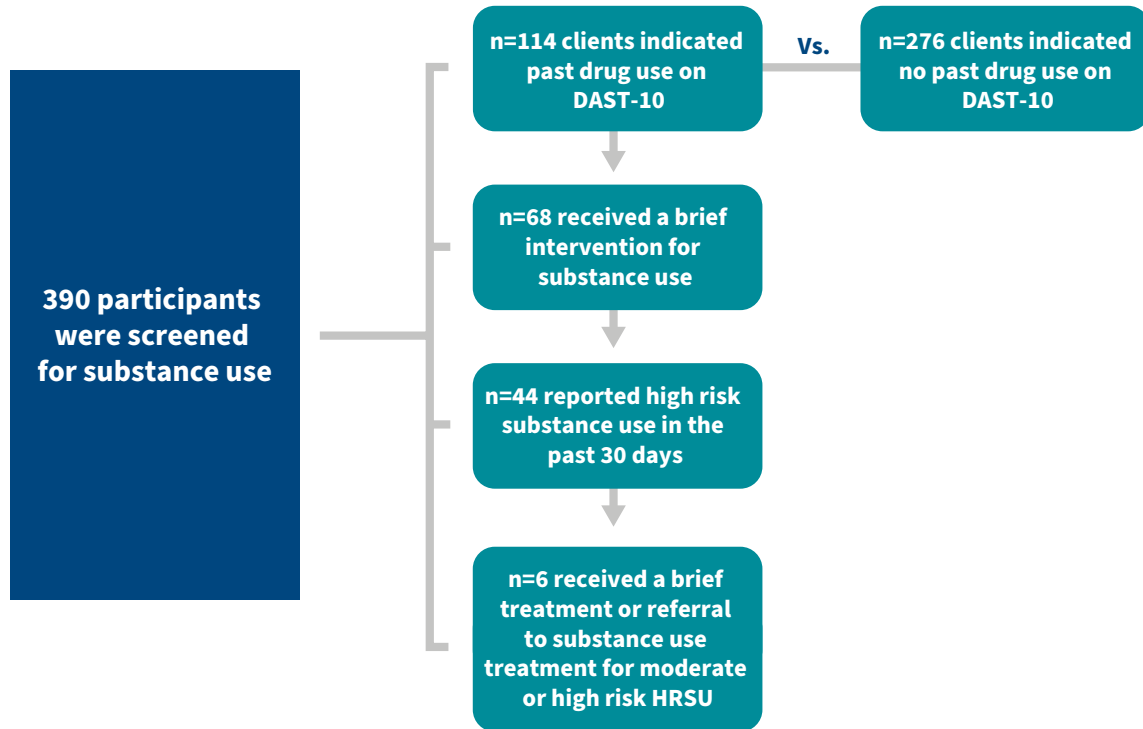


Figure 7: Self-Reported Drug Use Frequency, All Locations, n=121

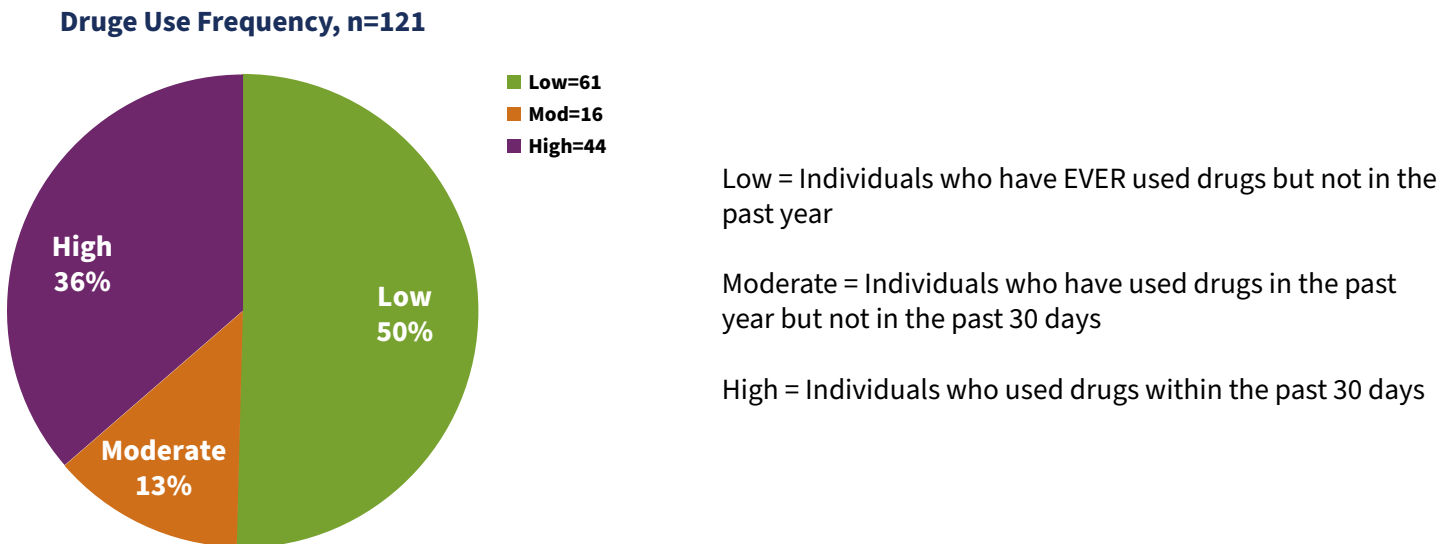
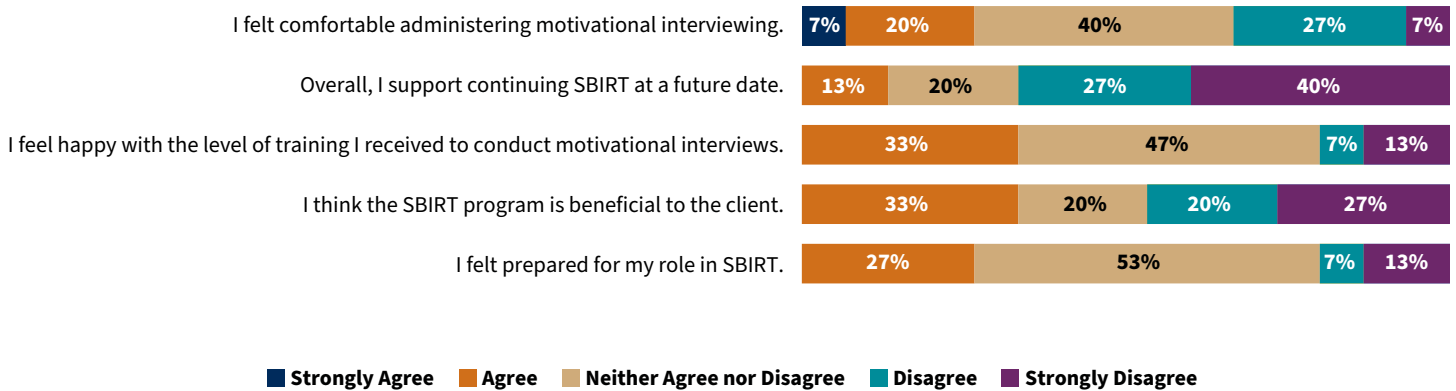


Figure 8: FCHD Provider Evaluation of SBIRT Program, n=15

SBIRT Program Evaluation



Conclusion

The NACCHO *Addressing High-Risk Substance Use through STI Clinics: Strengthening Connections to Treatment and Behavioral Health Services* project provided insight into how the SBIRT intervention could connect patients engaged in HRSU (use of illicit drugs, such as methamphetamine, and non-medical use of prescription drugs, like oxycodone) seeking treatment and care at STI clinics with substance use treatment services.

The sites overall were successful in demonstrating the impact of SBIRT for HRSU on motivating and connecting STI patients with substance use treatment. However, the impact of COVID-19 required all of the sites to modify their initial SBIRT for HRSU intervention strategies. During that time, one site recreated their protocol as a completely virtual engagement.

All sites found that SBIRT for HRSU encouraged patients to expand on their risks for STIs as well as discuss their motivations for HRSU. The intervention also was shown to offer opportunities to add additional screenings for conditions and behaviors associated with STIs and HRSU, including depression, alcohol use, and tobacco use.

Ultimately, SBIRT for HRSU provided a streamlined approach to address the syndemic of HRSU and STIs, creating opportunities to reach people with STIs engaged in HRSU and connect them with potentially lifesaving treatment and care.

Additional Resources

Site SBIRT scripts

Rhode Island STD Clinic – In Clinic

- [Miriam Hospital STD Clinic SBIRT Patient Locator Form](#)
- [Miriam Hospital STD Clinic SBIRT Patient Workflow](#)
- [Pre-COVID Intake Form](#)
- [Patient Data Collection Form](#)
- [Conversation Guide](#)
- [SBIRT Intervention “Cheat Sheet”](#)
- [SBIRT Worksheets](#)
- [Feasibility Questions \(Evaluation\) – In Clinic](#)

Rhode Island STD Clinic – Online

- [Intake Form](#)
- [Study e-Consent Form](#)
- [Telephone Script](#)
- [SBIRT Human Subjects Protocol](#)
- [SBIRT Protocol Diagram](#)
- [Feasibility Questions \(Evaluation\) - Online](#)

Unified Government of Wyandotte County and Kansas City Public Health Department (UGPHD) STI Clinic

- [Referral to Treatment Tracking Form](#)
- [STI Triage Form](#)
- [STI Post-DAST Form](#)
- [STI Triage 2 \(Post-DAST\) Form](#)
- [Referral to Treatment Tracking Form](#)

Fairfax County Health Department STI Clinic

- [Center for Substance Abuse Treatment \(CSAT\) Government Performance and Results Act \(GPRA\) Client Outcome Measures for Discretionary Programs Form](#)
- [Patient Screener Form \(Self-Report Drug Use, Depression, Alcohol, and Smoking Measures\)](#)
- [STI Clinic Record](#)
- [SBIRT Audit Tool](#)
- [Sexual History Tool](#)
- [Fairfax County Health Department STI Clinic HRSU Evaluation Framework](#)
- [Codebook](#)

Citations

- ¹ Copen CE, Brookmeyer KA, Haderxhanaj LT, Hogben M, Torrone EA. Sexual risk behaviors among persons diagnosed with primary and secondary syphilis who reported high-risk substance use: data from the National Notifiable Diseases Surveillance System, 2018. *Sexually Transmitted Diseases*. 2022 Feb 2;49(2):99.
- ² Liu S, Vivolo-Kantor A. A latent class analysis of drug and substance use patterns among patients treated in emergency departments for suspected drug overdose. *Addictive Behaviors*. 2020 Feb 1;101:106142.
- ³ Strathdee SA, Bristow CC, Gaines T, Shoptaw S. Collateral damage: A narrative review on epidemics of substance use disorders and their relationships to sexually transmitted infections in the United States. *Sexually Transmitted Diseases*. 2021 Jul 7;48(7):466.
- ⁴ Adedotun AF, Olanrewaju KO, Abass IT, Olumide SA, Oluwole AO, Onuche GO. Bayesian spatial analysis of socio-demographic factors influencing smoking, use of hard drugs and its residual geographic variation among teenagers of reproductive age in Nigeria. *International Journal of Sustainable Development and Planning*. 2022 Feb;17(1):277-88.
- ⁵ Compton WM, Jones CM. Substance use among men who have sex with men. *NEJM*. 2021 Jul 22;385(4):352-356. doi: 10.1056/NEJMra2033007. PMID: 34289278; PMCID: PMC9169429.
- ⁶ Werner RN, Gaskins M, Nast A, Dressler C. Incidence of sexually transmitted infections in men who have sex with men and who are at substantial risk of HIV infection—A meta-analysis of data from trials and observational studies of HIV pre-exposure prophylaxis. *PloS One*. 2018 Dec 3;13(12):e0208107.
- ⁷ Jemberie WB, Stewart Williams J, Eriksson M, Grönlund AS, Ng N, Blom Nilsson M, Padyab M, Priest KC, Sandlund M, Snellman F, McCarty D. Substance use disorders and COVID-19: multi-faceted problems which require multi-pronged solutions. *Frontiers in Psychiatry*. 2020 Jul 21;11:714.
- ⁸ Burns A, Albrecht K. Localized Syndemic Assemblages: COVID-19, Substance Use Disorder, and Overdose Risk in Small-Town America. *RSF: The Russell Sage Foundation Journal of the Social Sciences*. 2022 Dec 1;8(8):245-62.
- ⁹ Kidd SE, Grey JA, Torrone EA, Weinstock HS. Increased methamphetamine, injection drug, and heroin use among women and heterosexual men with primary and secondary syphilis—United States, 2013–2017. *MMWR*. 2019 Feb 2;68(6):144.
- ¹⁰ Harvey L, Taylor JL, Assoumou SA, Kehoe J, Perera R, Schechter-Perkins EM, Bernstein E, Walley AY. Sexually transmitted and blood-borne infections among patients presenting to a low-barrier substance use disorder medication clinic. *Journal of Addiction Medicine*. 2021 Nov;15(6):461.
- ¹¹ Kwan CK, Chan DP, Ho KM, Lee SS. Prevalence of sexually acquired hepatitis C virus (HCV) infection in sexually transmitted infection (STI) patients. *Hong Kong Journal of Dermatology & Venereology*. 2020 Jun 1;28.

- ¹² Rietmeijer CA. Improving care for sexually transmitted infections. *Journal of the International AIDS Society*. 2019 Aug;22:e25349.
- ¹³ Rogers BG, Murphy M, Zanowick-Marr A, Chambers L, Maynard M, Galipeau D, Toma E, Almonte A, Napoleon S, Chan PA. Characterizing HIV syndemics and the role of incarceration among men who have sex with men presenting for care at a sexually transmitted infections clinic. *AIDS and Behavior*. 2023 Jan 12:1-0.
- ¹⁴ Learner ER, Grey JA, Bernstein K, Kirkcaldy RD, Torrone EA. Primary and Secondary Syphilis Among Men Who Have Sex with Men and Women, 2010 to 2019. *Sexually Transmitted Diseases*. 2022 Nov 1;49(11):794-6.
- ¹⁵ Zlotorzynska M, Sanchez T. Food insecurity as a social determinant of sexual health and substance use independent of poverty status among men who have sex with men in the United States. *Annals of Epidemiology*. 2022 Oct 1;74:97-103.
- ¹⁶ Butsang T, McLuhan A, Keown LA, Fung K, Matheson FI. Sex differences in pre-incarceration mental illness, substance use, injury and sexually transmitted infections and health service utilization: a longitudinal linkage study of people serving federal sentences in Ontario. *Health & Justice*. 2023 Apr 1;11(1):19.
- ¹⁷ Ellis MS, Kasper ZA, Takenaka B, Buttram ME, Shacham E. Associations of Transactional Sex and Sexually Transmitted Infections Among Treatment-Seeking Individuals with Opioid Use Disorder. *American Journal of Preventive Medicine*. 2023 Jan 1;64(1):17-25.
- ¹⁸ Walters SM, Kerr J, Cano M, Earnshaw V, Link B. Intersectional stigma as a fundamental cause of health disparities: A case study of how drug use stigma intersecting with racism and xenophobia creates health inequities for Black and Hispanic persons who use drugs over time. *Stigma and Health*. 2023 Mar 2;8(3):325–343.
- ¹⁹ Javanbakht M, Rosen A, Ragsdale A, Richter EI, Shoptaw S, Gorbach PM. Interruptions in mental health care, cannabis use, depression, and anxiety during the COVID-19 pandemic: findings from a cohort of HIV-positive and HIV-negative MSM in Los Angeles, California. *Journal of Urban Health*. 2022 Apr;99(2):305-15.
- ²⁰ Shoptaw S, Li MJ, Javanbakht M, Ragsdale A, Goodman-Meza D, Gorbach PM. Frequency of reported methamphetamine use linked to prevalence of clinical conditions, sexual risk behaviors, and social adversity in diverse men who have sex with men in Los Angeles. *Drug and Alcohol Dependence*. 2022 Mar 1;232:109320.
- ²¹ Feaster DJ, Parish CL, Gooden L, Matheson T, Castellon PC, Duan R, Pan Y, Haynes LF, Schackman BR, Malotte CK, Mandler RN. Substance use and STI acquisition: Secondary analysis from the AWARE study. *Drug and Alcohol Dependence*. 2016 Dec 1;169:171-9.
- ²² Saitz R, Palfai TP, Cheng DM, Alford DP, Bernstein JA, Lloyd-Travaglini CA, Meli SM, Chaisson CE, Samet JH. Screening and brief intervention for drug use in primary care: the ASPIRE randomized clinical trial. *JAMA*. 2014 Aug 6;312(5):502-13.
- ²³ Bertholet N, Meli S, Palfai TP, Cheng DM, Alford DP, Bernstein J, Samet JH, Lloyd-Travaglini C, Saitz R. Screening and brief intervention for lower-risk drug use in primary care: A pilot randomized trial. *Drug and Alcohol Dependence*. 2020 Aug 1;213:108001.
- ²⁴ Kim TW, Bernstein J, Cheng DM, Lloyd-Travaglini C, Samet JH, Palfai TP, Saitz R. Receipt of addiction treatment as a consequence of a brief intervention for drug use in primary care: A randomized trial. *Addiction*. 2017 May;112(5):818-27.
- ²⁵ Bohnert AS, Bonar EE, Cunningham R, Greenwald MK, Thomas L, Chermack S, Blow FC, Walton M. A pilot randomized clinical trial of an intervention to reduce overdose risk behaviors among emergency department clients at risk for prescription opioid overdose. *Drug and Alcohol Dependence*. 2016 Jun 1;163:40-7.
- ²⁶ Yu J, Appel P, Rogers M, Blank S, Davis C, Warren B, et al. Integrating intervention for substance use disorder in a healthcare setting: practice and outcomes in New York City STD clinics. *Am J Drug Alcohol Abuse*. 2016;42(1):32–8.
- ²⁷ Babor TF, McRee BG, Kassebaum PA, Grimaldi PL, Ahmed K, Bray J. Screening, Brief Intervention, and Referral to Treatment (SBIRT): toward a public health approach to the management of substance abuse. *Subst Abuse*. 2007;28(3):7–30. doi: 10.1300/J465v28n03_03.

- ²⁸ Centers for Disease Control and Prevention. *Sexually Transmitted Diseases Surveillance 2017*. Atlanta, GA: US Department of Health and Human Services; 2018.
- ²⁹ Substance Abuse and Mental Health Services Administration. *Behavioral Health Barometer: Rhode Island, 2015*. Rockville, MD; 2015. Report No.: HHS Publication No. SMA-16-Baro-2015-RI.
- ³⁰ Murali V, Jayaraman S. Substance use disorders and sexually transmitted infections: a public health perspective [Internet]. *BJPsych Advances*. 2018 [cited 2019 Jun 18]. Available from: /core/journals/bjpsych-advances/article/substance-use-disorders-and-sexually-transmitted-infections-a-public-health-perspective/65EC0021CB2675831FCB4F73E6B5FDEE
- ³¹ Substance Abuse and Mental Health Services Administration. National Survey of Substance Abuse Treatment Services (N-SSATS). US Department of Health and Human Services; 2017.
- ³² Farfour E, Dimi S, Chassany O, Fouéré S, et al, DRIVER study group. Trends in asymptomatic STI among HIV-positive MSM and lessons for systematic screening. *Plos one*. 2021 Jun 24;16(6):e0250557.
- ³³ Dangerfield II DT, Heidari O, Cooper J, Allen S, Lucas GM. Motivations for opioid and stimulant use among drug using Black sexual minority men: A life course perspective. *Drug and Alcohol Dependence*. 2020 Oct 1;215:108224.
- ³⁴ Skinner HA. The Drug Abuse Screening Test. *Addict Behav*. 1982;7(4):363-371.
- ³⁵ Yudko E, Lozhkina O, Fouts A. A comprehensive review of the psychometric properties of the Drug Abuse Screening Test. *J Subst Abuse Treatment*. 2007;32:189-198.
- ³⁶ Miller WR and Rollnick S. *Motivational Interviewing: Helping People to Change (3rd Edition)*. 2013. Guilford Press.
- ³⁷ Babor TF, de la Fuente JR, Saunders J, Grant M. AUDIT. The Alcohol Use Disorders Identification Test. *Guidelines for Use in Primary Health Care*. Geneva, Switzerland: World Health Organization, 1992.
- ³⁸ Saunders JB, Aasland OG, Babor TF, de la Puente JR, and Grant M. Development of the Alcohol Use Disorders Screening Test (AUDIT). WHO collaborative project on early detection of persons with harmful alcohol consumption. II. *Addiction*. 1993;88:791-804.
- ³⁹ PA Harris, R Taylor, R Thielke, J Payne, N Gonzalez, JG. Conde, Research electronic data capture (REDCap) – A metadata-driven methodology and workflow process for providing translational research informatics support. *J Biomed Inform*. 2009 Apr;42(2):377-81.
- ⁴⁰ PA Harris, R Taylor, BL Minor, V Elliott, M Fernandez, L O’Neal, L McLeod, G Delacqua, F Delacqua, J Kirby, SN Duda, REDCap Consortium, The REDCap consortium: Building an international community of software partners. *J Biomed Inform*. 2019 May 9 [doi: 10.1016/j.jbi.2019.103208].
- ⁴¹ Kansas Department of Aging and Disabilities. *Kansas Behavioral & Mental Health Profile*. 2019. Retrieved from <https://www.kdads.ks.gov>.
- ⁴² *County Health Rankings & Roadmaps. Wyandotte County, KS*. 2018. Retrieved from <http://www.countyhealthrankings.org/app/kansas/2018/rankings/wyandotte/county/outcomes/overall/snapshot>
- ⁴³ Unified Government Public Health Department. 2018 Sexually Transmitted Infections (STI) in Wyandotte County. 2019. Retrieved from https://www.wycokck.org/WycoKCK/media/Health-Department/Documents/2018-STI-Report_FINAL.pdf
- ⁴⁴ Kansas Partnership for Improving Community Health. Sexually Transmitted Disease Rate, County: Wyandotte, Measurement Period: 2015-2017. 2018. Retrieved from <http://www.kansashealthmatters.org/>
- ⁴⁵ Adhikari EH. Syphilis in pregnancy. *Obstetrics & Gynecology*. 2020 May 1;135(5):1121-35.